



April 6, 2012

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Director of Water Policy and Planning  
Executive Office of Energy and Environmental Affairs  
100 Cambridge Street, Suite 900  
Boston, MA 02114

*Submitted via email, hard copy to follow*

Dear Ms. Baskin,

Thank you for the opportunity to comment on the *Massachusetts Sustainable Water Management Initiative Draft Framework* (SWMI Framework), released by the Executive Office of Energy and Environmental Affairs (EEA) on February 3, 2012. After much hard work by many people, this document offers some important advances in the protection of rivers and streams in Massachusetts. The RSC commends the time and thought put into this document and offers the following comments.

As you know, 29 miles of the Sudbury, Assabet and Concord Rivers were nationally designated as Wild and Scenic Rivers in 1999 because of their outstanding resource values including recreation, scenery, ecology, history and literature. The River Stewardship Council, comprising representatives from federal and state governments, the eight shoreline communities, Sudbury Valley Trustees, OARS and SuAsCo Watershed Community Council was created and authorized to work with the National Park Service on protection and management of the rivers. Streamflow and water quality are of central interest to the RSC because they have had, and have potential to have, significant impacts on these rivers. Many parts of the watershed are stressed, due to the significant demands put on them by water withdrawals and wastewater discharges. Hence, the policies discussed in SWMI have far reaching implications for these rivers. It is for these reasons that we are offering the following comments.

The RSC believes that river management policies must have a scientific basis. SWMI has brought together many experts and invested in information needed to understand river systems in order to develop defensible streamflow criteria. This is a great foundation from which to develop specific criteria. Unfortunately, the same scientific underpinnings have not been applied to the safe yield determinations. The safe yield analysis should be more refined: it should take into consideration the variability of flow through the year, and not use annual average flow rates; it should recognize the variability of flow within a large watershed (headwater streams versus downstream on the main stem), and set 'true' safe yields for tributary streams within the river system, as well as for ecologically appropriate reaches of the main stem.

The SuAsCo river system provides a good example of a system with wide variations in flow illustrating why annual flow averaging would not work. At the gage in Saxonville, March of 2010 showed some of the highest recorded flows, (2560 CFS monthly max, provisional data) while August flows were extremely low. An annual average would obfuscate these extremes; a poor approach given the predictions for more extreme weather patterns. While we recognize that the EEA safe yield is not based on a single year's data, the problem is that the summer drought condition represents the limit of water withdrawals, yet the safe yield could be much higher than the water available in the summer.

The second problem is applying the safe yield at the basin scale. Some of the SuAsCo tributaries support critical and sensitive ecosystems, including cold water fisheries (Nashoba Brook, for example). If safe yield is calculated at the broader watershed scale than these smaller and highly valuable streams have the real potential to be disproportionally impacted by this approach to safe yield estimation. In the Concord Basin flows can range from as low as 3.54 CFS on the Sudbury River in Saxonville (USGS gage, provisional data), to 32 CFS on the same day on the Concord River in Lowell (USGS gage, Lowell). A safe yield figure using generalized and averaged flow data over an entire watershed with this diversity will not be protective of these sensitive ecosystems in the upper reaches of the basin and will not be sustainable over time.

The Wild and Scenic Rivers Act stresses that designated rivers and their resource values should be 'protected and enhanced'. In this vein, the RSC is supportive of the streamflow criteria requirement to improve depleted streams. The RSC does not think that any category of river should be ignored and left to further impairment, and in fact, rivers should be restored to an unimpaired state (Category 3 in the State's criteria). Restoration is possible even in the most impaired streams, and state policy should aim to make improvements over time. Many of these impaired segments are located in highly populated areas and are well loved and important to the quality of life in our region; they need to be restored and protected to the greatest degree possible.

The Water Management Act regulates wells that are over 100,000 gallons per day. However, there are many other withdrawals within the system that, in aggregate, have potential to impact flows. In order to estimate a 'true' safe yield, some of the other stressors on the system should be identified. For example, in the SuAsCo watershed there are water withdrawals from the river for irrigation. This is completely consumptive or nearly so as the irrigation flows are evaporated or taken up by the crops resulting in no direct or groundwater return to the river system. Additionally, there are many private wells which cumulatively have the potential to impact

streamflow. In some cases, towns have encouraged private well development for lawn watering through a local bylaw. Sudbury is an example. Because lawns are watered most during times of low streamflow, and because much of the applied water is lost to evaporation, these wells impact a safe yield analysis. These kinds of withdrawals, not regulated under the Water Management Act, must be included in any meaningful safe yield analysis.

Regulations and guidance under the Water Management Act should include ways to encourage local governments to manage all withdrawals in their community in order to protect safe yield. It is not in the best interest of the river to control large regulated withdrawals but not discourage other wasteful water uses and withdrawals under 100,000 gallons per day, particularly private irrigation wells. Towns should be encouraged to think creatively about ways to utilize their water resources in a manner that protects the streams. Using MWRA water during periods of low flow in local rivers is one example that could be considered by more communities. Framingham, which currently uses MWRA water, is exploring the possibility of reactivating local wells in close proximity to the Sudbury River. Based on analysis by USGS (a strong scientific basis), stakeholders are trying to determine when and how much water can be pumped while protecting the river. Continuing to use MWRA water during certain periods in order to protect the river might be one potential solution for the town. This type of management scheme is already being used in Reading (which has switched from local wells to being fully serviced by MWRA) and also in Marlborough to protect local river resources. There are other examples of conservation measures, pricing schemes, metering etc. that towns should be encouraged to adopt in order to reduce demands.

The RSC does not support a policy that encourages communities to discharge more treated effluent into local rivers, either as mitigation or to offset withdrawals. On the Assabet River, it has taken well over a decade to understand and begin to address the severe water quality impairments caused by excessive nutrients discharged into the river. The solution has required a major investment by local communities. There is now ongoing research into other contaminants contained in treated wastewater, including pharmaceuticals, which are not well regulated. The Water Management Act should not encourage a practice that may lead to other harmful consequences, especially before more research is conducted. Groundwater discharges of treated wastewater that are designed to have adequate time and distance to attenuate before reaching the river and its tributaries, should be considered instead. Further research may also be required in this case as well.

We appreciate the opportunity to comment on this proposal, and we thank you, and all those working on the SWMI, for the time and effort spent in creating new water policy for Massachusetts.

Sincerely,

Mary Antes, Secretary  
Sudbury, Assabet and Concord Wild and Scenic River Stewardship Council

